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BOROUGH OF MALDON.

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR

1914,

BY

C. UNDERWOOD WHITNEY,

L.R.C.P., M.R.C.S.,

(*Deputy Medical Officer of Health*).

MALDON:
Richard Poole, Printer, 37, High Street.

1915.

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BOROUGH OF MALDON.

To the Mayor, the Aldermen and the Burgesses of the Borough of Maldon.

GENTLEMEN,

I beg to submit to you the Annual Report on the sanitary condition of the Borough of Maldon during the year 1914.

A. Natural and Social Conditions of the District.

(1.) PHYSICAL FEATURES.—The Borough of Maldon is situated on both banks of the River Blackwater, at the upper part of its tidal portion. The town is built for the greater part on a ridge of London clay, capped in places with gravel, which rises to a height of about 120 feet above sea-level. The portion of the town on the left bank of the river is on low alluvial ground, protected from high tides by a sea wall.

(2.) POPULATION.—The population at the census of 1911 was 6,248, showing an increase of 11% during the preceding ten years. In the same period the number of inhabited houses had increased by only 8%, and the density of the population had risen from 4·28 to 4 35 inhabitants per house. The estimated population for the middle of 1914 was 6,475.

(3.) SOCIAL CONDITIONS.—The chief occupations of the inhabitants are connected with Ironworks, Saw mills, Flour mills, Fishing and Seafaring, besides the usual trades of a small country town. None of these occupations has any prejudicial effect on the public health. The only home work in the town is in connection with the retail shops, and is quite negligible in quantity.

The nearest General Hospital is the Chelmsford Infirmary, where a considerable number of operation cases are sent annually.

There is a cottage Nursing Association in the town, which provides the services of one General and one Maternity nurse.

B. Sanitary Conditions of the District.

(1.) Water Supply.—With the exception of a few outlying houses in the Rural part of the Borough, water is supplied by the Corporation's Mains on the intermittent system. The water is derived from two deep wells bored into the Thanet and Reading sand and gravel beds below the London Clay to a depth of about 440 and 290 feet respectively. About 100,000 gallons per day are delivered, giving about 15 gallons per inhabitant—but another 50,000 gallons can be given if necessary. The Union House and two Breweries each have private wells so that the quantity is ample. The water is quite free from organic pollution, fairly soft in character (7° to 8°) moderately saline (42 and 58 gr. per gallon from the two wells) and practically free from plumbo-solvent action.

There are several old surface wells in the town, which are as a rule contaminated with sewage, and should not be used for domestic purposes.

(2.) Rivers and Streams.—The Rivers in the Borough are the Chelmer and the Blackwater estuary. The Chelmer receives no contamination in the Borough. The tidal Blackwater receives the sewage of the town, and shell fish from the upper reaches are not safe for food.

(3.) Sewerage and Drainage.—The sewage from 1,134 houses is taken by the main sewerage system to tanks about a mile below the town. From them it is discharged on the ebb tide into the Blackwater estuary. About 240 houses which are so situated that their drainage cannot reach the main system, are connected with short sewers which discharge into the estuary opposite the town. On the north side of the river there is not sufficient fall for a proper sewerage system, and pail closets are made use of which are emptied 3 times weekly by the Sanitary Authority. The slop water from these houses is disposed of in cesspools.

(4.) Closet Accommodation.—There are 1,348 W.C. houses in the Borough provided with water, besides 26 hand flushed W.C.'s. There are also 101 pail closets and 10 privies. During the year 5 privies have been converted into W.C.'s.

(5.) Scavenging.—1,460 houses are provided with sanitary dust-bins, which are emptied weekly by the Sanitary Authority. 221 houses were provided with these receptacles during the year. Pail closets are emptied three times weekly by the Sanitary Authority, and the few remaining brick ash pits on the request of the occupiers. The Authority does not undertake the emptying of cesspools.

(6.) Sanitary Inspection of the District.—The details of the work of the Sanitary Inspector will be found in Table 5.

(7.) Premises and Occupations which can be controlled by Bye-Laws.—Half-yearly inspections are made of the one common lodging house, 6 slaughter houses, 9 bakehouses, 7 dairies and milk-shops, and 7 cowkeepers' premises. There are no offensive trades or underground bakehouses or sleeping rooms.

(8.) Schools.—The school premises are now in a satisfactory condition, and properly supplied with water. Scarlet Fever was prevalent in the Borough at the beginning of the year, but the epidemic slowly subsided through the summer and autumn, and had practically died out by the end of the year. The type of disease was a mild one; consequently the detection of cases was often difficult, and some were missed in the early stages—this condition no doubt prolonged the duration of the epidemic.

(9.) Food.—(*a*) Milk Supply.—Dairies, cowsheds and milk-shops are registered as directed by the Local Government Board order of 1885, and are inspected half-yearly.

(*b*.) Other Foods.—Food exposed for sale is inspected from time to time. Two seizures of unsound meat were made during the year. The condition of the bakehouses and of slaughter houses is satisfactory.

(*c.*) The Sale of Food and Drugs Act is administered by the County Council.

(10.) Housing.—Number of Dwelling Houses inspected under and for the purposes of Section 17 of the Act of 1909.	71
Number of Dwelling Houses which on inspection were considered to be in a state so dangerous and injurious to health as to be unfit for human habitation.	1
Number of representations made to the local authority with a view to the making of closing orders.	1
Number of closing orders made.	1
Number of Dwelling Houses the defects in which were remedied without the making of closing orders.	0
Number of Dwelling Houses which after the making of closing orders were put into a fit state for human habitation.	1

General Character of the Defects found to Exist.

Insufficient light and ventilation to rooms; defective flushing apparatus to closets; defective paving to yards; defective arrangements for domestic refuse.

The working class houses of the district are for the most part satisfactory. Some old and defective houses still exist, but the general standard of house property is being levelled up year by year. One case of overcrowding was discovered and was abated.

Only six new houses were built during the year. The only remedy for the existing cases of unsatisfactory housing lies in the provision of new houses at a rental which will make them available for the relatively low wages of the district.

The Town Council has recently revised the building Bye-laws for the Borough, and the new Bye-laws are now in force.

C. Sanitary administration of the District.

1. The Medical Officer of Health is also the Medical Superintendent of the Isolation Hospital, and is engaged in general practice.

The Sanitary Inspector is the Borough Surveyor.

There is no Health Visitor in the district.

2. The Isolation Hospital is situated a mile outside the district, and is for the joint use of the Borough and a portion of the Rural District. An arrangement has been made to admit patients from the Port Sanitary District, and from the neighbouring Urban District of Witham. The Hospital is administered by the Maldon Joint Hospital Board which meets monthly. Accommodation is available for the simultaneous treatment of two diseases. No charge is made to the patients. The Board has also a site on which tents are kept in readiness for the isolation of Small Pox. 50 cases of Scarlet Fever (out of 53 notified) were received from the Borough during the year, one of these being a military case. Four cases of Diphtheria (out of 5 notified) were admitted: three of these being military cases. There was also one case of Enteric Fever notified and removed to Hospital from a part of the Borough some distance outside the town—the patient was a child.

Eight beds for cases of Pulmonary Tuberculosis are provided in shelters in the Hospital Grounds by the Essex County Council and are administered by the Joint Hospital Board and its staff.

3. The local acts in force in the district are:

The Maldon Water Works Act, 1898, under which the Maldon Corporation became owners of the Maldon Water Works.

The Maldon Joint Hospital Act, 1903, under which the Maldon Joint Hospital District was constituted. It is administered by the Maldon Joint Hospital Board, consisting of five members from the Maldon Rural District Council, and four members from the Maldon Corporation.

The following adoptive acts are in force in the district:

The Public Health Act Amendment Act, 1890—Part III.

The Infectious Diseases Prevention Act, 1890.

The Private Streets Works Act, 1892.

The Public Health Amendment Act, 1907, Parts II, III, (except sec. 43), IV, (except sec. 68), V, VI, sec. 81 of Part VIII, and Part X.

4. Material for bacteriological examination is sent to the Counties Public Health Laboratories, London. Such examinations are carried out in all cases of Diphtheria, and in doubtful cases of Pulmonary Tuberculosis. No chemical analyses have been made during the year.

D. Prevalence of and control over Acute Infectious Diseases.

The outbreak of Scarlet Fever which began in October, 1913, continued through the first half of the year, and then slowly died out. The mild type of the disease made its detection and control extremely difficult. Careful tabulation of the cases and their surroundings showed that the disease was certainly not milk-born, but was due to personal contact, partly in and partly out of school. Undoubtedly some cases escaped detection altogether and helped to spread the disease.

All infected houses were visited personally by the Medical Officer, and were disinfected by formaline spray after removal of the patients. All "contacts" in the patients houses, and so far as known in others were examined. School premises were disinfected, and the scholars in classes where cases had occurred were examined—sometimes successfully—for "missed" cases. Fortunately no deaths occurred.

E. Prevalence of and control over Tuberculosis.

Tuberculosis is the most fatal of all diseases in this country except cancer. Last year saw two important steps in the campaign against it, in the compulsory notification of all cases, pulmonary and other; and in the extensive provision of Sanatorium treatment.

A Tuberculosis dispensary has been opened in the Borough, under Dr. Macfie, the Tuberculosis Officer for the Colchester district, who attends weekly. Patients are seen at the dispensary, and when possible suitable cases are sent to Sanatoria for treatment.

The Medical Officer of Health visits all cases notified to him, and revisits them as advisable. At the same time he makes enquiries as to the health of other members of the household, with a view to detecting unrecognised cases.

All deaths from Tuberculosis are at once notified to the Medical Officer, and premises and bedding are disinfected on the death or removal of patients.

F. Investigation of other Diseases.

It is satisfactory to note that the relative freedom from epidemic diarrhœa noted last year is again noticeable this year; no fatal case being reported this year, while only one was reported in 1913.

G. Means of preventing Mortality in Child-birth and in Infancy.

The Notification of Births Act has not been adopted in the Borough, and it is questionable whether any advantage would be gained by its adoption. One is glad to report that there is no serious amount of neglect or improper management of infants, such as is found in many districts.

H. Special arrangements made in consequence of the War.

The Medical Officer of Health, Dr. H. Reynolds Brown, left the Borough in October for service with the British Expeditionary Force in France—in his absence his work is being carried out by the Deputy Medical Officer of Health.

The Borough has been taxed to its fullest extent to provide accommodation for the troops that have been quartered in it, and special provision has been made in various ways to meet the extra demand thus made upon the sanitary arrangements. Arrangements were also made to deal with cases of infectious disease arising among the troops, and as far as possible steps were taken to deal with the new conditions, which considerably increased the risk of an outbreak of infectious disease. It was arranged to remove cases of infectious disease occurring among the troops to the Isolation Hospital at Heybridge so long as accommodation could be provided for them there, and further arrangements were made in conjunction with the military authorities for other accommodation to be provided if need should arise.

Care has been taken to prevent the billeting of troops in unsuitable quarters: and an inspection of billets is made periodically by a representative of the Local Government Board, the Military Sanitary and Medical Officers for the district, and the Medical Officer of Health. The results of such inspections have been very satisfactory. The Sanitary and Medical Officers of the troops and the Medical Officer of Health are in frequent communication with each other, and co-operate at once to deal with any condition that arises which may affect the health of the civil or military population.

The water supply has proved sufficient for the greatly increased demand made upon it. There has been no trouble or complaint with regard to it.

It is most satisfactory to note that so far the public health of the Borough under these conditions has been excellent; and that the continued presence of such a large number of men has had no adverse influence upon it.

I am, Gentlemen,

Your obedient servant,

C. U. WHITNEY.

Table I.—Borough of Maldon.

Vital Statistics of Whole District during 1914 and Previous Years.

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Un-corrected Number.	Nett.				of Non-residents registered in District.	of Residents registered beyond District.	Under 1 year of age.		At all ages.	
			Number.	Rate.*	Number.	Rate.*			Number.	Rate per 1,000 nett births.	Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1909	6,126	129	125	20·4	117	19·0	37	3	9	70	82	13·4
1910	6,195	128	122	19·7	99	14·4	33	2	9	70	68	11·0
1911	6,265	128	127	19·9	127	20·3	33	8	19	149	102	16·3
1912	6,335	121	113	17·8	115	18·2	32	5	8	70	88	13·0
1913	6,405	121	117	18·3	95	14·8	25	3	7	60	73	11·4
1914	6,475	113	112	17·3	108	16·7	32	5	9	80	81	12·5

* Rates in Columns 5, 7 and 13 calculated per 1,000 of estimated population.

Area of District in acres (exclusive of area covered by water.) } 3,028.

Total population at all ages, 6,248. Number of inhabited houses, 1,437. Average number of persons per house, 4.35. } At Census of 1911.

I. Institutions within the District receiving sick and infirm persons from outside the District.	II. Institutions outside the District receiving sick and infirm persons from the District.	
Maldon Union Infirmary.	Heybridge Isolation Hospital.	

Table II.—Borough of Maldon.

Cases of Infectious Disease notified during the year 1914.

NOTIFIABLE DISEASE.	Cases notified in Whole District.									Total Cases notified in each locality.				Total Cases removed to Hospital.
	At all Ages.	Years.								All Saints'.	St. Peter's.	St. Mary's.	Union House	
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65	65 and upwards.						
Small-pox	...	...	...	...	...	...	...	...		...	...	...	...	...
Cholera (C) Plague (P) ...	...	...	...	...	...	...	...	...		...	...	...	...	...
Diphtheria (including Membranous croup)	5	...	...	1	3	...	1	...		3	2	...	...	4
Erysipelas	3	...	...	...	...	1	1	1		...	...	3	...	...
Scarlet fever	53	1	9	34	5	4	...	...		10	16	27	...	50
Typhus fever	...	...	...	...	...	...	...	...		...	...	...	...	...
Enteric fever	1	...	...	1	...	...	...	...		...	1	...	...	1
Relapsing fever	...	...	...	...	...	...	...	...		...	...	...	...	...
Continued fever	...	...	...	...	...	...	...	...		...	...	...	...	...
Puerperal fever	1	...	...	...	...	1	...	...		...	...	1	...	...
Cerebro-Spinal Meningitis ...	...	...	...	...	...	...	...	...		...	...	...	...	...
Poliomyelitis	...	...	...	...	...	...	...	...		...	...	...	...	...
Ophthalmia Neonatorum ...	2	2	...	...	...	...	...	...		...	...	2	...	...
Pulmonary Tuberculosis ...	11	...	1	...	...	7	2	1		...	1	7	3	...
Other forms of Tuberculosis ...	6	...	2	1	3	...	...	...		2	3	1	...	...
Chicken-pox (Notifiable after 25th Sept., 1914)	8	...	2	6	...	...	...	...		...	2	6	...	...
Measles (Notifiable after 25th Sept., 1914)	1	...	...	1	...	...	...	...		...	1	...	...	...
Totals	91	3	14	44	11	13	4	2		15	26	47	3	55

Isolation Hospital—Name and situation, Maldon Joint Hospital, Heybridge. *Sanatorium*—County Council Sanatorium, Heybridge, 8 beds.

Total available beds, 10. *Number of diseases that can be concurrently treated*, 2.

Table III.—Borough of Maldon.
Causes of, and Ages at Death during Year 1914.

Causes of Death.	Nett Deaths at subjoined ages of "Residents" whether occurring within or without the district.									Total Deaths in Public Institutions.
	All ages.	Under 1.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 & upwards.	
All causes — Certified	81	9	4	3	1	3	8	17	36	43
All causes — Uncertified	...	...	...	...	...	...	...	...	...	...
1 Enteric fever	...	...	...	...	...	...	...	...	...	...
2 Small-pox	...	...	...	...	...	...	...	...	...	...
3 Measles	...	...	...	...	...	...	...	...	...	...
4 Scarlet fever	...	...	...	...	...	...	...	...	...	...
5 Whooping cough	4	1	3	...	...	...	...	...	...	...
6 Diphtheria and croup	...	...	...	...	...	...	...	...	...	...
7 Influenza	...	...	...	...	...	...	...	...	...	...
8 Erysipelas	...	...	...	...	...	...	...	...	...	...
9 Phthisis (Pulmonary Tuberculosis) ...	3	...	...	...	...	...	2	1	...	3
10 Tuberculous meningitis	...	...	...	...	...	...	...	...	...	...
11 Other tuberculous diseases ...	1	...	...	1	...	...	...	...	...	...
12 Cancer, malignant disease ...	9	...	...	...	...	...	...	3	6	...
13 Rheumatic fever	...	...	...	...	...	...	...	...	...	...
14 Meningitis	...	...	...	...	...	...	...	...	...	...
15 Organic Heart Disease	13	...	...	...	...	...	3	5	5	8
16 Bronchitis	6	...	1	1	...	...	...	1	4	5
17 Pneumonia (all forms)	6	2	1	...	...	...	...	1	2	3
18 Other diseases of respiratory organs	1	...	...	...	1	...	...	...	...	1
19 Diarrhœa and enteritis	1	1	...	...	...	...	...	...	...	...
20 Appendicitis and Typhlitis ...	...	...	...	...	...	...	...	...	...	...
21 Cirrhosis of liver	...	...	...	...	...	...	...	...	...	...
21a Alcoholism	...	...	...	...	...	...	...	...	...	...
22 Nephritis and Bright's Disease ...	4	...	...	...	...	...	...	2	2	5
23 Puerperal fever	...	...	...	...	...	...	...	...	...	...
24 Other accidents and diseases of pregnancy and parturition ...	1	...	...	...	...	1	...	...	...	...
25 Congenital debility and malformation, including premature birth	6	6	...	...	...	...	...	...	...	1
26 Violent deaths, excluding suicide	2	...	...	...	...	...	1	1	...	...
27 Suicide	...	...	...	...	...	...	...	...	...	...
28 Other defined diseases	25	1	1	...	...	1	4	5	15	17
29 Diseases ill-defined or unknown ...	...	...	...	...	...	...	...	...	...	...
	81	9	5	2	1	2	10	18	34	43
Sub-Entries. Included in above figures. 14 (*a*) Cerebro-spinal Meningitis ...										
28 (*a*) Poliomyelitis ...	...	...	...	...	...	...	...	...	...	...

Table IV.—Borough of Maldon. INFANT MORTALITY during the Year 1914.

Nett Deaths from stated causes at various ages under One Year of Age.

CAUSE OF DEATH.	Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 4 weeks.	1-3 months.	3-6 months.	6-9 months.	9-12 months.	Total Deaths under One Year.
All Causes { Certified	1	3			4	1	1	2	1	9
All Causes { Uncertified										
Small-pox										
Chicken-pox										
Measles										
Scarlet Fever										
Whooping Cough						1				1
Diphtheria and Croup										
Erysipelas										
Tuberculous Meningitis										
Abdominal Tuberculosis										
Other Tuberculous Diseases										
Meningitis (*not Tuberculous*)										
Convulsions										
Laryngitis										
Bronchitis										
Pneumonia (all forms)								2		2
Diarrhœa, all forms										
Enteritis										
Gastritis										
Syphilis										
Rickets										
Suffocation, overlying										
Injury at birth										
Atelectasis										
Congenital Malformations	1				1		1		1	3
Premature Birth		2			2					2
Atrophy, Debility, and Marasmus..		1			1					1
Other Causes										
	1	3			4	1	1	2	1	9

Nett births in the year—legitimate 105, illegitimate 7. Nett deaths in the year—legitimate infants 9, illegitimate infants 0.

Table V.

SUMMARY OF WORK done through the Sanitary Inspector in the Urban Sanitary District of Maldon, during the year ending December 31st, 1914.

		Total No. for Year.
1	Complaints received	10
2	Nuisances detected without complaint ..	80
3	Nuisances abated	90
4	Nuisances remaining unabated	—
5	Formal Notices served	82
6	Summonses taken out	—
7	Convictions obtained	—
8	Lodging-houses inspected	1
9	Slaughter-houses inspected	6 ½-yearly
10	Bakehouses inspected	9 ½-yearly
11	Dairies and Milk Shops inspected	7 ⅙-yearly
12	Cowsheds inspected	7 ½-yearly
13	No. of samples of milk taken for examination for cleanliness, etc.	—
14	Filthy Houses cleansed, Sec. 46, P.H. Act, 1875	—
15	Houses disinfected	60
16	Cases of overcrowding abated	1
17	Houses erected or re-built for which Water "Certificates" were applied	6
18	"Certificates" granted	6
19	,, deferred	—
20	Public Wells, total No. in District	—
21	New Public Wells sunk, or improved supplies of water afforded	—
22	Wells cleansed or repaired	—
23	Wells closed	—
24	Privies. No. in district	10
25	,, No. abolished during the year ..	5
26	Pail Closets. No. in District	101
27	Water Closets. No. in District without flushing cisterns	26
28	Water Closets, with flushing cisterns ..	1348
29	Privies and W.C.'s repaired; W.C.'s supplied with water	18
30	Water cisterns cleansed, repaired, or covered ..	1
31	Animals improperly kept removed	—
32	Samples of water taken for analysis ..	—
33	Compensation paid for destruction of infected bedding	1
34	Seizures of unsound meat, &c.	2

(Signed) THOS. R. SWALES.

Table VI.—Borough of Maldon.

Report on the administration of the Factory and Workshop Act, 1901, in connection with

FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES AND HOMEWORK.

INSPECTION.

Including inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions. (4)
Factories .. .. (Including Factory Laundries)	—	—	—
Workshops .. .. (Including Workshop Laundries)	10	—	—
Workplaces .. .. (Other than Outworkers' premises)	—	—	—
TOTAL ..	10	—	—

Defects found, 1.—Insufficient, unsuitable and defective sanitary accommodation.

Registered Workshops, &c. :—Bakehouses 9, Others 24. Total 33.

Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory & Workshop Acts (s. 5, 1901) { Notified by H.M. Inspector 1
Reports (of action taken) sent to H.M. Inspector 1